

PUB-NO: WO009325411A1
DOCUMENT-IDENTIFIER: WO 9325411 A1
TITLE: IMPROVEMENTS RELATING TO
GARMENT HANGERS
PUBN-DATE: December 23, 1993

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APPL-NO: GB09301285
APPL-DATE: June 17, 1993

PRIORITY-DATA: GB09212807A (June 17, 1992)

INT-CL (IPC): B60R007/10

EUR-CL (EPC): B60R007/10

US-CL-CURRENT: 224/275

ABSTRACT:

CHG DATE=19990617 STATUS=O>There is described a garment hanger for attachment to a vehicle seat having one or more pillars extending upwardly from the seat back to carry a head restraint, the garment hanger comprising a garment supporting structure adapted to support the shoulder and collar portions of a garment, and a mounting structure adapted to be attached to the vehicle seat by engagement with the pillar or pillars extending from the upper surface of the vehicle seat back and connecting the vehicle seat to a headrest mounted above the back of the vehicle seat, the mounting structure being capable of supporting the garment supporting structure adjacent the upper end of the seat back portion without engaging the front surface of the seat.



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 5 : B60R 7/10	A1	(11) International Publication Number: WO 93/25411 (43) International Publication Date: 23 December 1993 (23.12.93)
<p>(21) International Application Number: PCT/GB93/01285</p> <p>(22) International Filing Date: 17 June 1993 (17.06.93)</p> <p>(30) Priority data: 9212807.3 17 June 1992 (17.06.92) GB</p> <p>(71)(72) Applicant and Inventor: GREEN, Russell [GB/GB]; 6 Primrose Gardens, South Queensferry, West Lothian EH30 9QQ (GB).</p> <p>(74) Agent: TOPLEY, Paul; G.F. Redfern & Co., Marlborough Lodge, 14 Farncombe Road, Worthing, West Sussex BN11 2BT (GB).</p> <p>(81) Designated States: US, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).</p>		<p>Published <i>With international search report.</i></p>
<p>(54) Title: IMPROVEMENTS RELATING TO GARMENT HANGERS</p> <div> </div> <p>(57) Abstract</p> <p>There is described a garment hanger for attachment to a vehicle seat having one or more pillars extending upwardly from the seat back to carry a head restraint, the garment hanger comprising a garment supporting structure adapted to support the shoulder and collar portions of a garment, and a mounting structure adapted to be attached to the vehicle seat by engagement with the pillar or pillars extending from the upper surface of the vehicle seat back and connecting the vehicle seat to a headrest mounted above the back of the vehicle seat, the mounting structure being capable of supporting the garment supporting structure adjacent the upper end of the seat back portion without engaging the front surface of the seat.</p>		

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IMPROVEMENTS RELATING TO GARMENT HANGERS

The present invention relates to garment hangers, and is particularly concerned with a garment hanger attachable to a vehicle seat headrest.

Hitherto, it has been proposed to mount a garment hanger in a vehicle by attaching a garment hanger to the back portion of a vehicle seat. US Patent 1,722,122 illustrates such a device, wherein the apex of a substantially triangular garment hanging portion is supported at the upper end of a stem which lies vertically along the rear surface of a seat back, the hanger further including a pair of hook-like arms which extend over the top of the seat back to engage the front surface of the seat back, adjacent its upper edge.

European Patent 0,497,786 shows a similar arrangement, wherein a garment supporting bar having a central collar section and downwardly and outwardly extending shoulder supporting sections is attached to the upper portion of a vehicle seat back by means of a pair of substantially vertical struts which extend downwardly from the garment supporting portion, the lower ends of the struts being formed with inverted 'U' shaped hooks which engage the upper surface of the seat back, and also engage the front and rear surfaces of the seat back adjacent the upper edge.

Since both the devices described above include portions which engage the front surface of the seat back, they are of necessity a source of discomfort to any occupant of the vehicle seat. A further disadvantage of these devices is that, since the portions which engage the front surface of the seat back form part of the supporting structure of the garment hanger, they are necessarily elements having a relatively high strength and are thus likely to be formed of hard materials. Not only does this increase the level of discomfort occasioned to an occupant of the seat, but in the event of accidents these portions of the garment hanger could cause injury to a relatively vulnerable area of the seat occupant, i.e. the neck. Due to the substantially rigid nature of the hooks, the fitting of

the prior art devices to seats having different dimensions requires shaping of the hooks by the user to fit the particular seat concerned, which can lead to poor gripping of the seat by the hanger device.

In order to overcome the disadvantages of the prior art, the present invention provides a garment hanger for use within a vehicle, the garment hanger allowing a jacket or similar garment to be hung at substantially its full length behind the driving or passenger seat of the vehicle, without any obstruction to the front surface of the upright portion of the seat to which it is attached or the headrest of that seat. With the garment hanger of the present invention, all possibility of injury or discomfort to the occupant of the vehicle seat from which the hanger is suspended is avoided.

A further disadvantage of the devices of the prior art is that, due to the presence of a substantial structure attached to the upper rear portion of the vehicle seat back, significant risk of injury to a vehicle passenger seated behind the garment hanger is occasioned. While the garment hangers of the prior art are detachable from the seats of the vehicle, their subsequent stowage either within the vehicle or in its luggage compartment is problematic in that they are bulky and occupy an inordinate amount of space.

The present invention further seeks to provide a readily detachable garment hanger arrangement for use with a vehicle seat, wherein a supporting structure may be left permanently or semi-permanently attached to the vehicle seat or headrest and may be moved between an extended position, in which a garment supporting element may be attached to the supporting structure, and a retracted position wherein the supporting structure is retracted so as to minimise the risk of injury to passengers travelling in the vehicle.

According to the present invention, a garment hanger for attachment to a vehicle seat headrest comprises a garment supporting structure adapted to support the shoulders and collar portions of a garment, and a mounting structure adapted to be attached to the

vehicle seat by engagement with one or more pillars extending from the upper surface of the vehicle seat back and connecting the vehicle seat to a headrest mounted above the back of the vehicle seat, the mounting structure being capable of supporting the garment supporting structure adjacent the upper end of the seat back portion. The garment supporting structure may be supported either behind or in front of the upper end of the seat back portion.

Embodiments of the present invention will now be described in detail with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a first embodiment of the garment hanger;

Figures 2 to 5 are perspective views to an enlarged scale of the component parts of the garment hanger shown in Figure 1; and

Figure 6 is an exploded perspective view of a second embodiment of the garment hanger of the present invention.

Referring now to Figure 1, there is seen, in perspective view, the upper portion 11 of a vehicle seat back, above which a head restraint 10 is supported by means of a pair of pillars 12 extending from the underside of the head restraint 10 to the upper surface of the vehicle seat back 11.

The garment hanger according to this embodiment of the invention comprises a garment supporting bar 9 shaped to conform to the interior contours of the shoulders of a jacket or coat. Extending downwardly from the central portion of the garment support bar 9 is a strut 8, whose lower end is bifurcated to form two end portions 8a which engage a limb of a 'T' piece 6 between them.

Referring now also to Figures 2 to 5, the garment hanger includes a pair of supporting bars 7, each of which includes a substantially straight portion 7a and a hook-like end portion 7b. In use, the supporting bars 7 are received in a pair of parallel passages 13 in the 'T' piece 6, with the hooked ends 7b at opposite ends of the 'T' piece 6. The supporting bars 7 are slidable within the passages 13, and in use the 'T' piece is positioned between the supporting pillars 12 and the support bars 7 are pushed together so

that their hooked ends 7b engage respective pillars 12. Securing means may be provided in the 'T' piece to retain the support bars 7 in tight engagement with the pillars 12.

The 'T' piece 6 further includes a limb 15 which, in use, projects rearwardly from the 'T' piece. The limb 15 is provided with an opening 15a, and in use the limb 15 is received between the bifurcated end portions 8a of the strut 8. Each of the bifurcated end portions 8a is formed with a slot 16 so that a threaded fastener or the like may be passed through the slots 16 and the slot 15a and may be tightened to clamp the strut 8 into any desired position relative to the limb 15 of the 'T' piece 6.

Referring now to Figure 6, there is seen a second embodiment of the invention, wherein a garment support 20 has a central collar shaping region 21 and a pair of ~~shoulder supports 22 extending~~ downwardly and outwardly from the central collar shaping region 21.

The garment support 20 is releasably attached to the upper end of a strut 23, which is itself releasably received at its lower end in a socket 24 of a support structure constituted by a bearing pad 25 and a retaining yoke 26.

The bearing pad 25 is a generally 'L' shaped component, having a top plate 27 and a backplate 28. The socket 24 is formed on the backplate 28 and has an upwardly facing opening to receive the lower end of the strut 23. The top plate 27 has a pair of bridges 29 formed on it to provide two parallel passages 30 thereunder. Aligned with the passages 30 are a pair of detents 31 whose purpose will be explained below.

The yoke 26 comprises a transverse bar 32, whose end portions 33 and 34 are slightly hooked rearwards. The rear surface 35 of the transverse bar 32 may be scalloped or otherwise shaped to cooperate with the pillars supporting a head restraint above a vehicle seat (not shown). Extending rearwardly from the transverse bar 32 are a pair of straps 36 dimensioned and spaced to cooperate with the passages 30 under the bridges 29 of the top plate 27 of the bearing pad 25.

To assemble the garment hanger of Figure 6 on a vehicle seat, the seat must be of the type which has a head restraint carried either on a central pillar, or on a pair of spaced pillars, extending out of the top surface of the back portion of the seat. The bearing pad 25 is first offered up to the seat back, with the top plate 27 resting on the top surface of the seat back, and with the backplate 28 engaging the rear surface of the seat back.

The yoke 26 is then laid on the top surface of the seat back, with the straps 36 in alignment with the passages 30 beneath bridges 29 of the bearing pad 25. In this position the transverse bar 32 of the yoke 26 passes in front of the pillar or pillars carrying the head restraint. In the case of a single central pillar, the straps 36 pass each side of the pillar, while in the case of two pillars the straps 36 pass between the pillars. ~~This configuration~~ of the yoke 26 allows the garment hanger to be fitted to virtually any vehicle seat having a head restraint supported above the seat back. By pulling the straps 36 through the passages 30, the transverse bar 32 is brought into close engagement with the pillar or pillars, while the bearing pad 25 has its backplate 28 urged into close engagement with the rear surface of the seat back, firmly anchoring the support structure to the seat without any part of the structure encroaching on the front surface of the seat back to inconvenience an occupant of the seat.

To secure the bearing pad 25 and yoke 26, the straps 36 are formed with a series of openings 37, which can be dropped over the detents 31 to secure the straps relative to the top plate 27 of the bearing pad 25. The rear edge of the transverse bar 32 of the yoke may be shaped, for example with recesses spaced to accept the pillars, so as to provide resistance to lateral forces.

The lower end of strut 23 is then inserted into socket 24 so that the strut 23 extends upwardly and rearwardly from the seat. Finally the garment support 20 is fitted to the upper end of the strut 23, by inserting the upper end of the strut 23 into a recess (not shown) in the underside of the central part 21 of the garment

support 20. The strut 23 is preferably curved, and the end portions and their cooperating formations on the bearing pad 25 and on the garment support 20 are preferably made symmetrical so that the strut 23 may be assembled with its concave surface facing forward or to the rear. This enables the hanger to fit closely against the rear of the seat or the headrest in a variety of different seat configurations and designs.

When the garment hanger is attached to the front seat of a vehicle, the garment support 20 is positioned above and behind the seat back, allowing a jacket hung on the garment support 20 to hang freely down behind the seat without obstructing the driver's view. When the rear seat is to be occupied by a passenger, the strut 23 and garment support 20 can be removed from the support structure, leaving the bearing pad 25 and yoke 26 attached to the seat. The small thickness and smooth contours of the bearing pad 25 pose no significant threat of injury to a passenger in the rear seat in the event of an accident, and the relatively small bulk of the garment support 20 and strut 23 are easily stowed in the vehicle.

The garment hanger of the present invention may be formed from plastics materials, or from wood or metal or combinations of these. It will be understood that the garment hanger will preferably be mountable behind the seat back, but a reversed installation is foreseen wherein the garment support is positioned in front of the seat.

In addition to the embodiments described above, it is foreseen that alternative arrangements for the supporting structure may be adopted, for example as an alternative to the bearing pad and yoke, a supporting structure may comprise a base member having passages spaced and dimensioned to receive the pillar or pillars carrying the head restraint. In such an arrangement, the base member may be in the form of a casing from which an arm may be pivotally, slidably or otherwise deployed to receive a garment support, the arm possibly being retractable to a position within or adjacent the casing when not in use. The base member may be positioned entirely

between the top surface of the seat back and the underside of the head restraint, or may have a frontal part positioned between the top surface of the seat back and the underside of the head restraint and a rear portion of greater height extending upwardly behind the head restraint.

As a further alternative, the rear or top surface of the seat back, or the rear or side surface or underside of the head restraint, may be formed with a mounting having a recess into which a support arm may be fixed so as to be extendable to receive a garment holder and retractable to prevent injury to passengers. It is foreseen that such a head restraint may be factory fitted, or may be provided separately as an accessory for fitting to vehicles as a replacement for the conventional unit.

CLAIMS

1. A garment hanger for attachment to a vehicle seat having one or more pillars extending upwardly from the seat back to carry a head restraint, the garment hanger comprising a garment supporting structure adapted to support the shoulder and collar portions of a garment, and a mounting structure adapted to be attached to the vehicle seat by engagement with the pillar or pillars extending from the upper surface of the vehicle seat back and connecting the vehicle seat to a headrest mounted above the back of the vehicle seat, the mounting structure being capable of supporting the garment supporting structure adjacent the upper end of the seat back portion without engaging the front surface of the seat.

2. A garment hanger according to Claim 1, wherein the mounting structure is fixed to the pillar or pillars of the vehicle seat, and the garment supporting structure is detachably mounted to the said mounting structure.

3. A garment hanger according to Claim 1 or Claim 2, wherein the garment supporting structure comprises a single strut extending upwardly and rearwardly from the mounting structure.

4. A garment hanger according to Claim 1, 2 or 3, wherein the mounting structure comprises a pair of hook members extending in opposite directions from a central body, the hook members being extendable and retractable relative to the central body.

5. A garment hanger according to Claim 1, 2 or 3, wherein the mounting structure comprises a bearing plate adapted to engage the top and rear surfaces of the seat back, and a yoke adapted to overlie the top surface of the seat back with a rear face of the yoke engaging the pillar or pillars.

6. A garment hanger according to Claim 5, wherein the yoke is adjustably attached to the bearing plate by tension straps fixable to the bearing plate at a plurality of points along their lengths.

7. A garment hanger according to Claim 1, 2 or 3, wherein the mounting structure comprises a base having a passage or passages to closely receive the pillar or pillars, a support arm being retractably mounted to the base for movement between an extended position to receive a garment support and a retracted position within or adjacent the base.

8. A garment hanger according to Claim 7, wherein the base is positioned entirely between the top surface of the seat back and the underside of the head restraint.

9. A vehicle seat assembly having a mounting to which a support arm is movably fixed for movement between a retracted and an extended position, the support arm in the extended position being positioned to receive and support a garment holder behind the seat back, and in the retracted position being positioned substantially within the contours of the seat.

10. A vehicle seat according to Claim 9, wherein the mounting is positioned in the rear or top surface of the seat back, or in the rear surface or the underside of a head restraint carried above the seat back.

11. A vehicle seat assembly having a support arm positioned to receive and support a garment holder behind the head restraint or the seat back.

12. A head restraint for a vehicle seat, formed with a mounting positioned in its rear surface and a support arm movably fixed to the mounting for movement between a retracted and an extended position, the support arm in the extended position being positioned to receive and support a garment holder behind the head restraint, and in the retracted position being positioned substantially within the contours of the head restraint.

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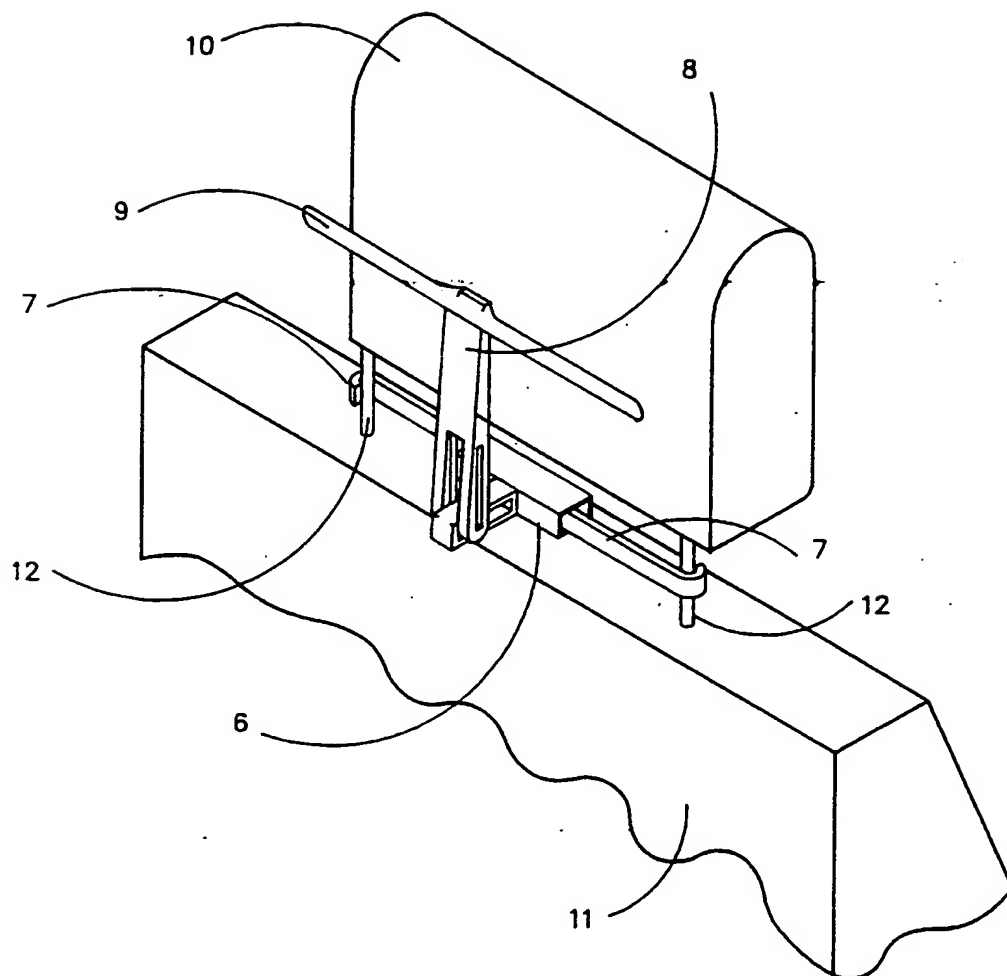


FIG 1

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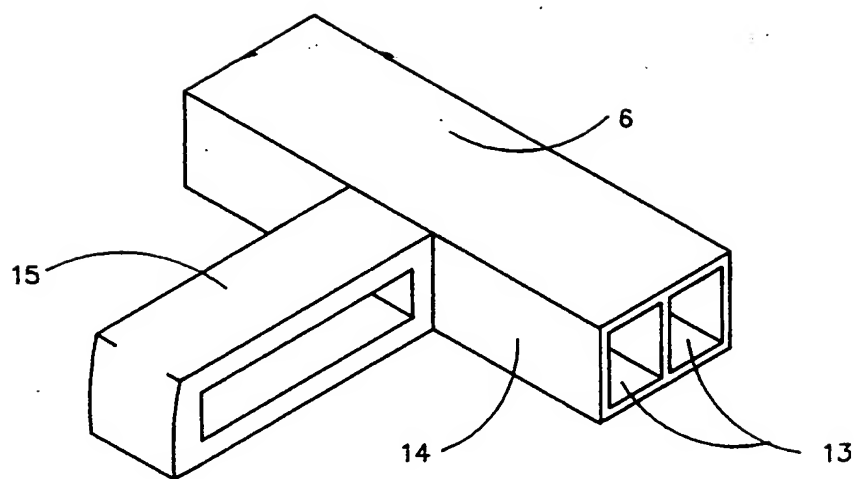


FIG 2

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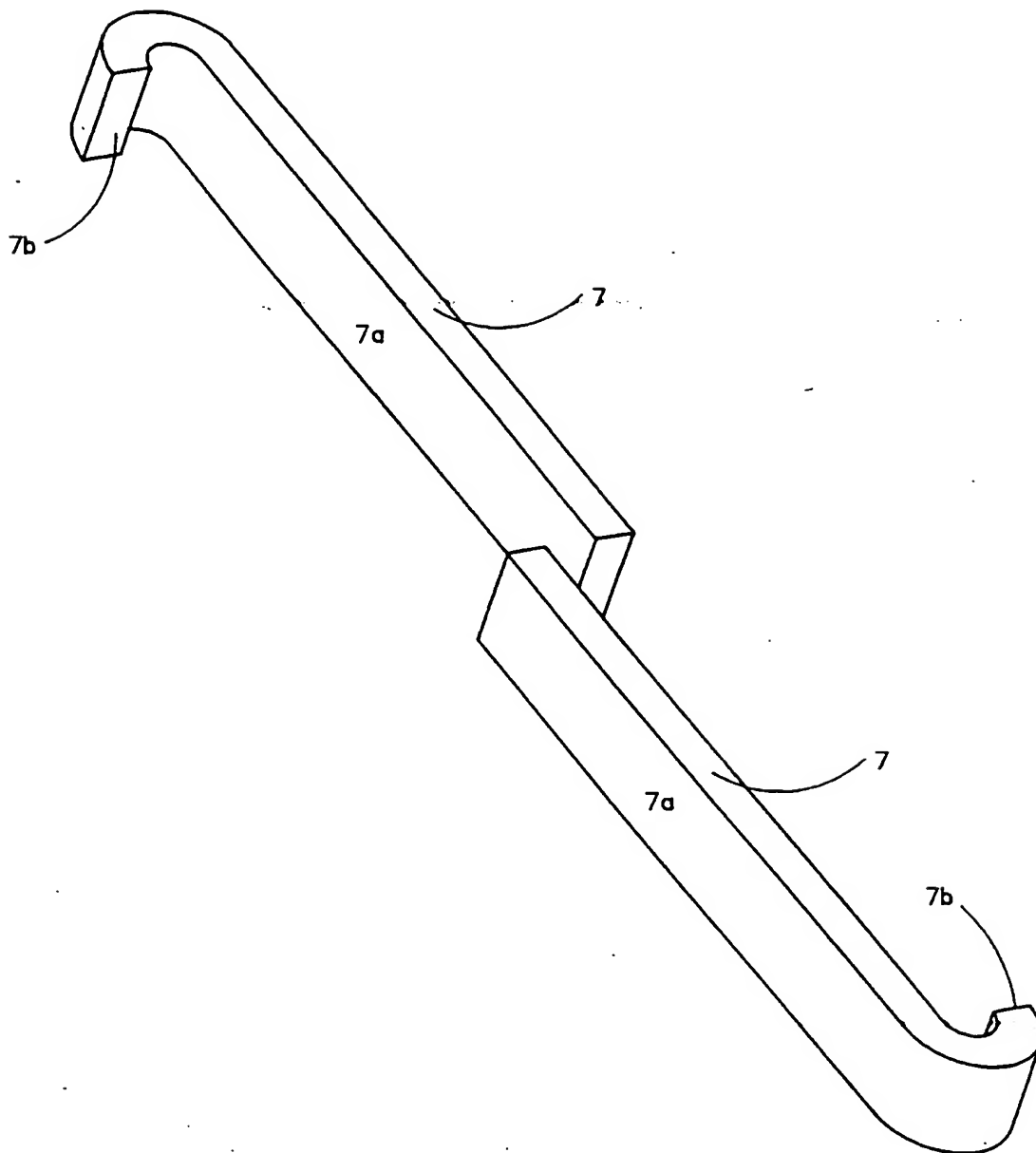


FIG 3

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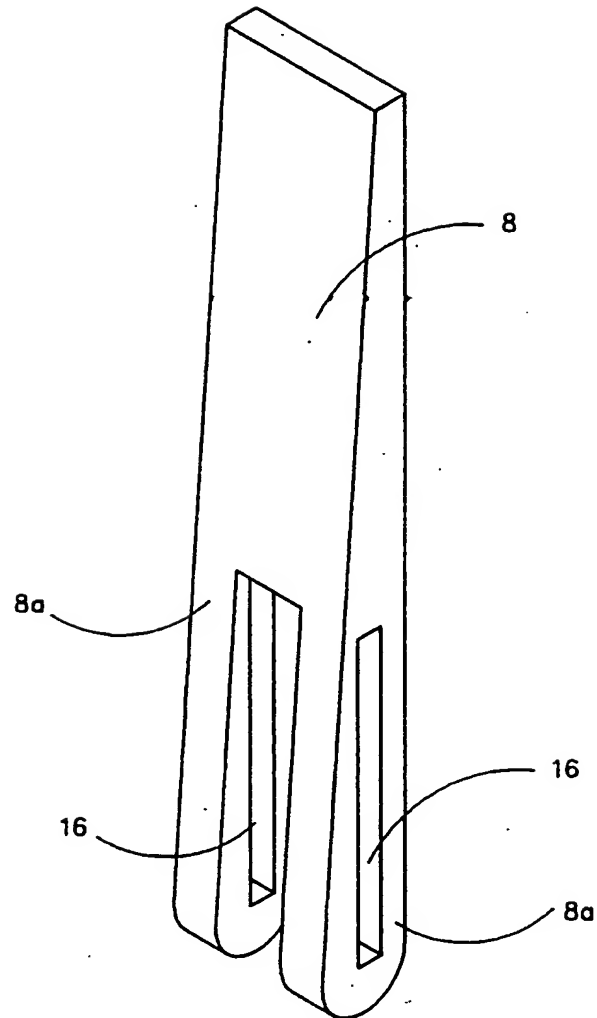


FIG 4

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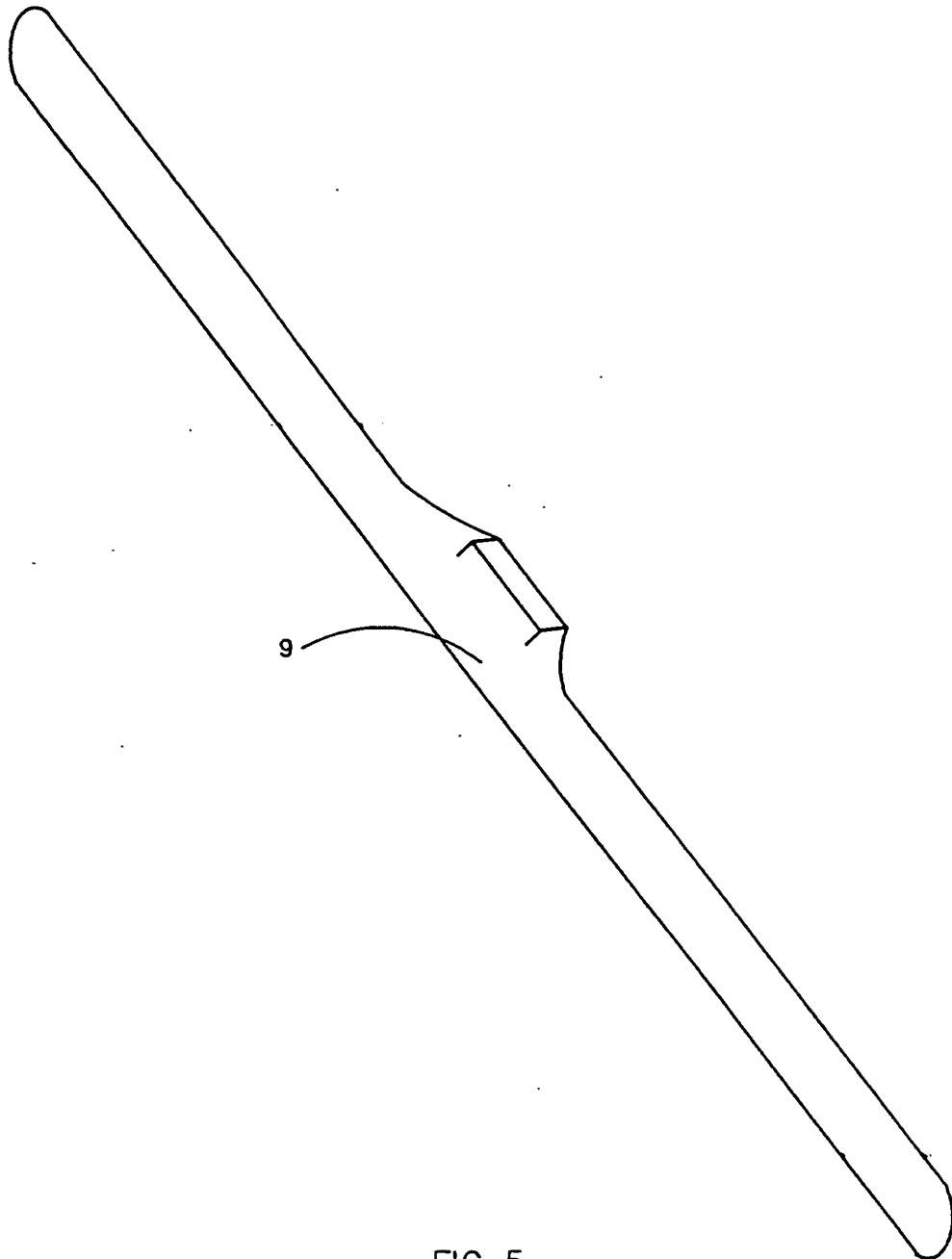
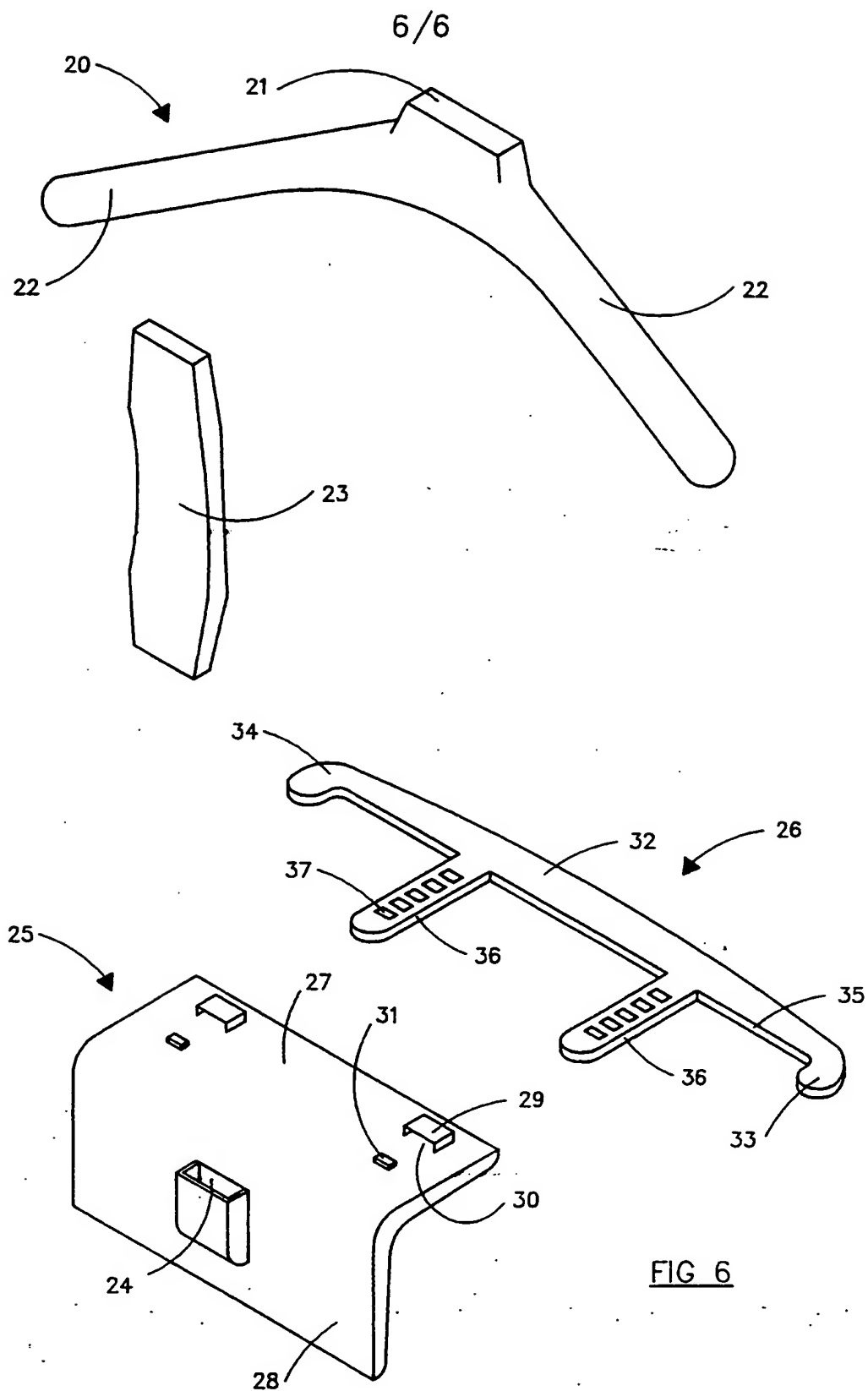


FIG 5

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB 93/01285

A. CLASSIFICATION OF SUBJECT MATTER

IPC5: B60R 7/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC5: B60R, B60N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO, A1, 9108928 (CARTER, KWAME IKEM ANDU), 27 June 1991 (27.06.91), page 2, line 15 - line 28 --	1-3,7-12
X	WO, A1, 9104173 (GONZALES, ARTHUR), 4 April 1991 (04.04.91), page 6, line 6 - page 7, line 21 --	11
A		1-10,12
X	US, A, 1722122 (W.T. WILSON), 23 July 1929 (23.07.29), page 1, line 58 - line 91 --	11
A		1-10,12

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search

10 Sept 1993

Date of mailing of the international search report

29.09.93

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INTERNATIONAL SEARCH REPORT

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US, A, 2583806 (J.H. BATZLE), 29 January 1952 (29.01.52) —	1-12
A	DE, C2, 2433984 (HAGLÖF, BÖRJE), 10 January 1985 (10.01.85) —	1-12
A	DE, A1, 3038888 (BODE, WERNER), 19 August 1982 (19.08.82) —	1-12
A	EP, A1, 0007974 (GEBR. HAPPICH GMBH), 20 February 1980 (20.02.80) — -----	9-12

INTERNATIONAL SEARCH REPORT
 Information on patent family members

30/07/93

 International application No.
 PCT/GB 93/01285

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO-A1-	9108928	27/06/91	AU-A-	7066591	18/07/91
			GB-A-	2255946	25/11/92
WO-A1-	9104173	04/04/91	CA-A-	2065742	23/03/91
			EP-A,B-	0497786	12/08/92
			US-A-	4957230	18/09/90
US-A-	1722122	23/07/29	NONE		
US-A-	2583806	29/01/52	NONE		
DE-C2-	2433984	10/01/85	JP-C-	888699	10/11/77
			JP-A-	50042970	18/04/75
			JP-B-	52016026	06/05/77
			SE-B,C-	389481	08/11/76
			SE-A-	7309929	17/01/75
			US-A-	3987946	26/10/76
DE-A1-	3038888	19/08/82	NONE		
EP-A1-	0007974	20/02/80	DE-A,B-	2834955	21/02/80